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JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

Vol. 21. October, 1919. No. 250.

CHANGES IN THE NOMENCLATURE OF THE GRAY'S MANUAL FERNS.

C. A. Weatherby.

In the course of preparing, as their second report, a preliminary list of the New England *Polypodiaceae, Schizaeaceae,* and *Osmundaceae,* the Committee on Floral Areas of the New England Botanical Club has been confronted with certain questions of taxonomy and nomenclature. As a result, the names used in their list will differ considerably from those in the 7th edition of Gray's Manual. The following has been written by way of explanation of these changes and in the hope that it may be of some service to users of the Manual to have the matter relating to them brought together in one place.

There is probably no other family of plants in which the accepted basis of classification has been so radically changed within the past few years as in the *Polypodiaceae.* The ferns, though an ancient group, have proved exceptionally conservative; their evolutionary variation has been confined within narrow limits and they present today a complex of closely inter-related groups, merging more or less into one another. They offer, therefore, especial difficulties in classification. All of the very different systems proposed by the older writers have been artificial to a greater or less degree and have suffered from laying too much emphasis on single characters or single kinds of characters. It is only within about twenty years that Diels has devised a system based on combinations of characters — a system which, so far as our present knowledge shows, seems essentially natural and which has gradually won its way to practically unanimous acceptance. It is because of these conditions in general and, in particular, of a consider-

able activity in the study of American ferns since 1908 that the changes discussed below are called for.

Aspidium.— It is a very great pity that in his work on the indispensable Index Filicum and on what promises to be his classical monograph of the shield ferns, Christensen should have overlooked the earliest valid name for this genus. The name which he took up, *Dryopteris* Adans., has long been the subject of controversy. As has several times been pointed out,[1] its publication was inadequate under the International Rules: for that reason, it was rejected by the editors of the Manual and the next earliest name known to them, *Aspidium* Sw., taken up. In 1910, however, Nieuwland discovered that there exists an entirely valid name, *Thelypteris* of Schmidel, applied to the marsh fern, *Acrostichum Thelypteris* L., and published in 1762, a year earlier than *Dryopteris*, with three or four pages of description and comment and two very excellent plates.[2]

There can be little question that this is the correct name for the shield ferns. Farwell has, indeed, put forward a rival in *Filix* Hill (1755).[3] Hill, however, merely uses the doubtful binomials *Filix Mas* and *Felix Foemina* as the headings of paragraphs in his Family Herbal containing popular descriptions in English of the male fern and the bracken respectively.[4] Such use can hardly constitute publication under any nomenclatorial code, certainly not under the International Rules. *Thelypteris* remains the earliest valid name for *Aspidium* of the Manual: and, much as one regrets adding another to the numerous names this genus has already borne, it must be taken up. Rules are of no use unless conscientiously followed.

Fernald [5] has pointed out that *Aspidium spinulosum*, var. *dilatatum*, f. *anadenium* differs from typical var. *dilatatum* of Europe not only in the absence of indusial glands but also in the characters of its scales, and that it should be regarded as a coördinate geographic variety. As such it was given a name, var. *americanum* by Fischer in 1848.

Asplenium.— the lady ferns and their allies.— Recent study has pretty conclusively shown that *Athyrium* is a good genus, differing constantly from *Asplenium* in the character of its scales, the anatomy of its stipe and its general habit and appearance. It constitutes a

[1] For instance, in Rhodora xxi. 10 (foot-note) (1919).
[2] Am. Midland Nat. i. 226 (1910).
[3] Ann. Rep. Mich. Acad. Sci. xviii. 79 (1917).
[4] Hill, Family Herbal 141 (1755).
[5] Rhodora, xvii. 44 ff. (1915).

group more primitive than the true Aspleniums and standing between them and *Thelypteris* in the evolutionary sequence, as we now construct it. The section *Athyrium,* then, of the Manual becomes a genus to which the last three species under *Asplenium* are to be transferred. Butters[1] has recently pointed out that (as in many similar cases) it is the lady fern of western America, heretofore generally known as *Athyrium* or *Asplenium cyclosorum,* not that of the eastern states, which is really conspecific with the original *A. Filix-femina* of Europe and should bear that name; and that our northeastern plants comprise two species, *A. angustum* and *A. asplenioides,* distinct from it and from each other and long ago recognized and named by Willdenow and Michaux. He also points out that *Asplenium angustifolium* and *A. acrostichoides* of the Manual belong rather with the tropical group *Diplazium* than with typical *Athyrium* (the lady ferns); but since there is doubt if *Diplazium,* though rather generally accepted, ought to be separated as a genus, it seems best to leave them, for the present at least, under the older name *Athyrium.*

Dicksonia.— The pasture fern and its congeners were long referred to *Dicksonia* because of a similarity in the structure of the indusium. They differ widely from it, however, in habit and, what is more important, in the structure of the sporangia, which is altogether that of the *Polypodiaceae,* not of the *Cyatheaceae* to which the true Dicksonias belong. Our fern should bear the name *Dennstaedtia* given it more than a century ago by Bernhardi.

Onoclea.— The two sections of *Onoclea,* as treated in the Manual, are now regarded by most authors as genera. The present writer confesses to some doubt as to the propriety of this segregation; but the weight of opinion is for it. The name *Onoclea* remains with *O. sensibilis.* The earliest generic name for the ostrich ferns, *Struthiopteris* Willd. (1809) is invalid because of an earlier *Struthiopteris* Scop. (1760). Nieuwland[2] has recently pointed out that the name usually taken up, *Matteuccia* Todaro (1866), is also long antedated by the obscurely published *Pteretis* Raf. which is the correct name for the genus. Fernald[3] has shown that the American ostrich fern is specifically distinct from the European and should bear the specific name *nodulosa,* given it by Michaux. *Pteretis nodulosa* (Michx.) Nieuwl. becomes the name for our ostrich fern.

[1] Rhodora, xix. 178ff. (1917).
[2] Am. Midland Nat. iii. 194ff. (1914).
[3] Rhodora, xvii. 161ff. (1915).

Osmunda.— The American royal fern differs from the European in the shape of its pinnules, a difference not altogether constant, but enough to make desirable its recognition as a geographic variety, *O. regalis*, var. *spectabilis* (Willd.) Gray.

Phegopteris.— From the point of view of the new classification, *Phegopteris* has always been an artificial genus. Our four northeastern species, indeed, seem, taken by themselves, to constitute a separable group; but when the related tropical species are taken into consideration, they are seen to be part of a series of forms which, in all other characters than the absence of an indusium, are readily referable to one or another sub-genus of *Thelypteris*. Diels, followed by Christensen and many others, seems to have been entirely correct in reducing *Phegopteris* to that genus; our species should be transferred to it and placed, in the Manual arrangement, between *T. noveboracensis* and *T. fragrans*.

Pteris.— *Pteridium* Scop. (1760), based on *Pteris aquilina* L., though slow to win recognition as a genus, is a very natural group, differing constantly from true *Pteris* in the usually double indusium, the anatomy of the stipe, the presence of basal trichomes instead of scales and one or two other minor characters. Scopoli's name should be taken up for our bracken. Britton[1] indeed, though accepting its segregation as a genus, retains the name *Pteris* for it, on the ground that *P. aquilina* is the type of the Linnaean genus. The only apparent reason for this is a provision in the American Code that, in the absence of other means of fixing a generic type, it should be chosen from species indigenous from the point of view of the author. There would seem to be a theoretical difficulty in determining what species are indigenous from the point of view of an author who, like Linnaeus, was describing the vegetation of the entire world; however, this need not concern followers of the International Rules. By them, the name *Pteris* must be retained for the larger, chiefly tropical group represented by *Pteris longifolia* L.

Not only the genus *Pteridium*, but its constituent species, have been slow of recognition, probably because of lack of attention to the excellent characters offered by the outer indusium, basal trichomes and pubescence. Instead of one cosmopolitan species, as so long supposed, it comprises at least six in different parts of the earth. Our bracken of the Manual region proves to be specifically distinct from

[1] Fl. Bermuda, 419 (1918).

the European in habit and characters of root-stock and indusium. Its distinctness was long ago recognized by Desvaux who gave it a name under *Pteris*. It should be known by the recently published combination, *Pteridium latiusculum* (Desv.) Maxon.

Scolopendrium.— In taking up the name *Phyllitis* for this genus, Christensen cited as its place of publication Ludwig, Instit., ed. 2. 142 (1757). Ludwig's description, however, is almost ludicrously inadequate, consisting of the single phrase "folio simplici" and applicable to the hart's-tongue rather than to any other simple-leaved fern only because of the mention under it of "*lingua cervina*." *Phyllitis* was therefore rejected in the Manual and the well-published *Scolopendrium* Sm. (1793) substituted. It appears, however, that *Phyllitis* was well and properly published in Scopoli's Flora Carniolica (1760). It should be taken up, but with the author citation Gleditsch ex Scop. instead of Ludwig. Under *Phyllitis* the correct specific combination is *P. Scolopendrium* (L.) Newman, based on *Asplenium Scolopendrium* L.

It may be observed that, of the thirty changes here recorded, eighteen are purely nomenclatorial, due to the discovery of earlier names than those previously in use — a somewhat sad comment on the wisdom of the Brussels Congress in refusing to adopt a list of nomina conservanda in ferns.

In the following summary, the Manual names, arranged alphabetically and printed in italics, come first under each number. They are followed, immediately after the = sign, by the names to be substituted for them, printed in small capitals or, in the case of the few new combinations necessary, in bold-faced type. The accepted names are followed, in turn, by any needed synonymy in italics.

1. *Aspidium* Sw. (1801) = THELYPTERIS Schmidel, Icon. Pl. ed. 2, 45, pls. 10 and 13 (1762). *Dryopteris* Adans. Fam. Pl. ii. 20 (1763).

2. *Aspidium Boottii* = THELYPTERIS BOOTTII (Tuckerm.) Nieuwl. Am. Mid. Nat. i. 226 (1910).

3. *Aspidium cristatum* = THELYPTERIS CRISTATA (L.) Nieuwl. l. c.

4. *Aspidium cristatum*, var. *Clintonianum* = THELYPTERIS CRISTATA, var. **Clintoniana** (D. C. Eaton), n. comb. *Aspidium cristatum*, var. *Clintonianum* D. C. Eaton in Gray's Man. ed. 5, 665 (1867).

5. *Aspidium Filix-mas* = THELYPTERIS FILIX-MAS (L.) Nieuwl. l. c.

6. *Aspidium fragrans* = THELYPTERIS FRAGRANS (L.) Nieuwl. l. c.

7. *Aspidium Goldianum* = THELYPTERIS GOLDIANA (Hook.) Nieuwl. l. c.

8. *Aspidium marginale* = THELYPTERIS MARGINALIS (L.) Nieuwl. l. c.

9. *Aspidium noveboracense* = THELYPTERIS NOVEBORACENSIS (L.) Nieuwl. l. c.

10. *Aspidium simulatum* = THELYPTERIS SIMULATA (Davenp.) Nieuwl. l. c.

11. *Aspidium spinulosum* = THELYPTERIS SPINULOSA (O. F. Muell.) Nieuwl. l. c.

12. *Aspidium spinulosum,* var. *concordianum* = THELYPTERIS SPINULOSA, var. **concordiana** (Davenp.), n. comb. *Nephrodium spinulosum,* var. *concordianum* Davenp. RHODORA, vi. 33 (1904).

13. *Aspidium spinulosum,* var. *dilatatum,* f. *anadenium* = THELYPTERIS SPINULOSA, var. **americana** (Fisch.), n. comb. *Aspidium spinulosum americanum* Fisch. ex Kze. Am. Journ. Sci. ser. 2, vi. 84 (1848).

14. *Aspidium spinulosum,* var. *intermedium* = THELYPTERIS SPINULOSA, var. **intermedia** (Muhl.), n. comb. *Polypodium intermedium* Muhl. ex Willd. Sp. Pl. v. 262 (1810).

15. *Aspidium Thelypteris* = THELYPTERIS PALUSTRIS Schott, Gen. Fil. note under pl. 10 (1834). *Acrostichum Thelypteris* L. Sp. Pl. 1071 (1753).

16. *Asplenium acrostichoides* = ATHYRIUM ACROSTICHOIDES (Sw.) Diels, Nat. Pfl. i. pt. 2, 223 (1899). *Athyrium acrosticoideum* Bory in Mérat, Fl. Paris, ed. 4, i. 471 (1836) is no bar to the use of the above combination, since it was merely a renaming of the earlier *Polypodium Leseblii* Mérat and therefore invalid from its inception, being a clear case of the so-called nomen abortivum.

17. *Asplenium angustifolium* = ATHYRIUM ANGUSTIFOLIUM (Michx.) Milde, Bot. Zeit. (1866) 376. *Asplenium angustifolium* Michx. Fl. Bor. Am. ii. 265 (1803), not Jacq. Coll. i. 121 (1786). *Asplenium pycnocarpon* Spreng. Anleit. iii. 112 (1804). *Athyrium pycnocarpon* Tidestrom, Elys. Marianum, 36 (1906).

18. *Asplenium Filix-femina* = a. ATHYRIUM ANGUSTUM (Willd.) Presl, Rel. Haenk. i. 39 (1825). *Aspidium angustum* Willd. Sp. Pl. v. 277 (1810). b. ATHYRIUM ASPLENIOIDES (Michx.) Desv. Mém. Soc. Linn. Paris, vi. 266 (1827). *Nephrodium asplenioides* Michx. Fl. Bor. Am. ii. 268 (1803).

19. *Dicksonia punctilobula* = DENNSTAEDTIA PUNCTILOBULA (Michx.) Moore Ind. Fil. xcvii (1857).

20. *Onoclea Struthiopteris* = PTERETIS NODULOSA (Michx.) Nieuwl.

Am. Midland Nat. iv. 334 (1916). *Onoclea nodulosa* Michx. Fl. Bor. Am. ii. 272 (1803). *Onoclea Struthiopteris* and *Matteuccia Struthiopteris* Am. auth., not *Osmunda Struthiopteris* L.

21. *Osmunda regalis* = OSMUNDA REGALIS L., var. SPECTABILIS (Willd.) Gray, Man. ed. 2, 600 (1856). *Osmunda spectabilis* Willd. Sp. Pl. v. 98 (1810).

22. *Phegopteris Dryopteris* = THELYPTERIS DRYOPTERIS (L.) Slosson ex Rydb. Fl. Rocky Mts. 1044 (1917).

23. *Phegopteris hexagonoptera* = THELYPTERIS **hexagonoptera** (Michx.), n. comb. *Polypodium hexagonopterum* Michx. Fl. Bor. Am. ii. 271 (1803).

24. *Phegopteris polypodioides* = THELYPTERIS PHEGOPTERIS (L.) Slosson ex Rydb. Fl. Rocky Mts. 1043 (1917). *Polypodium Phegopteris* L. Sp. Pl. 1089 (1753).

25. *Phegopteris Robertiana* = THELYPTERIS ROBERTIANA (Hoffm.) Slosson ex Rydb. Fl. Rocky Mts. 1044 (1917).

26. *Pteris* = PTERIDIUM Gled. ex Scop. Fl. Carn. 169 (1760).

27. *Pteris aquilina* = PTERIDIUM LATIUSCULUM (Desv.) Maxon, Am. Fern Journ. ix. 43 (1919). *Pteris latiuscula* Desv. Mém. Soc. Linn. Paris vi. 303 (1827). *Pteris aquilina* and *Pteridium aquilinum* Am. auth., not *Pteris aquilina* L.

28. *Pteris aquilina*, var. *pseudocaudata* = PTERIDIUM LATIUSCULUM, var. PSEUDOCAUDATUM (Clute) Maxon, Am. Fern Journ. ix. 44 (1919).

29. *Scolopendrium* Sm. (1793) = PHYLLITIS Gled. ex Scop. Fl. Carn. 171 (1760).

30. *Scolopendrium vulgare* = PHYLLITIS SCOLOPENDRIUM (L.) Newman, Hist. Brit. Ferns, ed. 2, 10 (1844). *Asplenium Scolopendrium* L. Sp. Pl. 1079 (1753).

EAST HARTFORD, CONNECTICUT.

THE HISTORY OF THE POPULAR NAME "FLOWER DE LUCE" OR "FLEUR DE LIS" OF THE IRIS.

Theo. Holm.

While reading some descriptions of American wild flowers, published in the National Geographic Magazine (May, 1915), I came across some statements about the meaning of the popular name "fleur de lis" for the *Iris*, which was said to be a corruption of "fleur de Louis," the flower of Louis!" — Moreover it was stated that the iris, or blue flag, is really meant when one speaks of the lily of France.

Having had the opportunity recently to study the history of various old plant-names, I have found some notes relative to the real meaning of a name, that has always puzzled me, namely the "flower de luce" applied to the genus *Iris* by several of our leading botanisst, Gray, Torrey, Nuttall and others. It is true that the name "fleur de lis" is also, and not infrequently, applied to this plant, but as will be demonstrated in the following, "lis" is not a corruption of "Louis," and the word "luce," although in itself a corruption, is nearer than any of the others to give us the explanation.

The old French name for the lily (*Lilium*) is "lys"[1]; the more modern is "lis"; "fleur de lis" refers to the flower in the French coat of arms, and this emblem is believed to date back to Louis VII. However, the history of heraldry tells us that the actual figure, once explained as representing a lily-flower, does suggest interpretations of very different nature. For instance, the figure resembles the points of a spear; furthermore the figure has been explained as representing a bee, judging from the designs, poorly carved on the old tombstones. Last not least, the figure has been considered to represent the flower of the yellow iris of Europe, *Iris Pseudacorus*, of which the popular name, many years ago, was "fleur de Lys."

For many centuries the yellow *Iris* is known to have grown in abundance in Flanders on the shores of the river Lys, and the popular name dates back to the year 486, when the Francs left Flanders,

[1] Compare: Cannart-d'Hamale: Essai d'une histoire littéraire des Lis. (La Belgique horticole Vol. 1. Liège 1851, p. 199.)

their old home, to invade and conquer Gallia, and establish the kingdom of France. In commemoration of their birthplace the Francs selected this flower for their emblem. In other words "fleur de Lys" is an abbreviation of "fleur de la Lys" i. e. "de la rivière de la Lys."

Clinton, Maryland.

PHANEROTAENIA, A NEW GENUS OF UMBELLIFERAE.

Harold St. John.

A few scraps of an umbelliferous plant sent by a bee-keeper in Texas, have involved the writer in a study of the genus *Polytaenia*.[1] As now treated this consists of one species, *P. Nuttallii* DC., which ranges from Michigan, Iowa, and Kansas southward to Alabama and Texas. There is also the var. *texana* C. & R. from Texas and Oklahoma. *P. Nuttallii* has corky-thickened lateral wings, more prominent than the depressed back of the mericarp; conspicuous calyx-teeth; oil-tubes superficially indistinct, several in the intervals, in the corky wings, and 4–6 on the commissural side. The var. *texana* has thin lateral wings, not corky-thickened, and less prominent and thinner than the body of the mericarp, which is dark-lined by the large prominent oil-tubes; the calyx-teeth concealed in the emarginate tip of the mature fruit; oil-tubes single in the intervals and 2 on the commissural side. There are several other differences, in the shape of the fruit and the cutting of the leaves, but these are all of a varietal or specific nature. On the contrary, the differences in the structure of the fruits of these two plants are so fundamental that the two should be treated as distinct genera. The new description follows:

Phanerotaenia gen. nov. Calycis dentes 5 inconspicui in apice fructus summersi. Petala lineari-oblonga emarginata, praemature caduca. Stamina dorsifixa. Fructus obovatus emarginatus a dorso valde plano-compressus glaber; juga lateralia ampla tenuia aliformia;

[1] This genus was renamed as *Pleiotaenia* by Coulter and Rose, Contrib. U. S. Nat. Herb. xii. 447 (1909), because of the existence of *Polytaenium* Desv., Mém. Soc. Linn. Paris vi. 218 (1827), which antedates by two years *Polytaenia* DC., Mém. Ombell. 53 (1829). This change is not necessary under the International Rules, since *Polytaenia* and *Polytaenium* differ by two letters, even though they are of the same derivation. Internat. Rules Bot. Nomen. Sect. 7, Art. 57 (1906).

juga dorsalia filiformia obscura. Vittae conspicuae fuscae ad valleculas solitariae fructus partem seminiferam longitudine aequantes, vittae commissurales 2. Stylopodium ad anthesin cylindratum humile, ab fructu deest. Carpophorum liberum bipartitum. Semen complanatum.— Herba perennis. Folia omnia alterna ternatim decomposita. Umbellae terminales. Involucrum nullum. Bracteae involucellorum lineari-subulatae pedunculos aequantes.

Calyx 5-toothed, the teeth sunken and inconspicuous on the mature fruit. Petals linear-oblong, emarginate, quickly deciduous. Stamens dorsifixed. Fruit obovate, emarginate, strongly compressed dorsally, glabrous; with broad thin, wing-like lateral ribs; the dorsal ribs filiform, obscure. The intervals each with one large, dark-colored, conspicuous oil-tube, running the full length of the body of the mericarp; the commissural face with two oil-tubes. Stylopodium on young flowers low, cylindrical, wanting on the fruit. Carpophore free, two-cleft. Seed fat.— A perennial herb. Leaves all alternate, ternately dissected. Umbels terminal. Involucre none. Involucels linear-subulate, as long as the peduncles.

Phanerotaenia belongs in the *Peucedaneae* of Bentham and Hooker's and of Drude's treatment of the family. There are no related genera with which it could be confused. *Oxypolis*, *Sphenosciadium* and *Heracleum* all differ in having conical stylopodia, while *Phanerotaenia* has the stylopodium wanting on the mature fruit. *Eurytaenia* has a depressed stylopodium, 3-cleft or pinnately dissected involucels and involucral bracts, and pinnately dissected leaves, while *Phanerotaenia*, with no stylopodium on the mature fruit, has simple involucels, no involucral bracts, and ternately dissected leaves. *Lomatium* is acaulescent, has the lateral wings adherent till maturity, 1-∞ oil-tubes in the intervals and 2–10 on the commissural side, while *Phanerotaenia* is caulescent, has the lateral wings free before maturity, oil-tubes single in the intervals, and 2 on the commissural side. *Euryptera* is acaulescent or nearly so, has the fruit cordate or emarginate at base, the lateral wings coherent till maturity, the oil-tubes 1-∞ in the intervals, the leaflets broad or broad in outline, while *Phanerotaenia* is caulescent, has the fruit cuneate or rounded, not emarginate at base, the lateral wings free before maturity, the oil-tubes single in the intervals, and the leaflets bluntly serrate.

Phanerotaenia **texana** (C. & R.) n. comb. *Polytaenia Nuttallii* DC., var. *texana* C. & R., Contrib. U. S. Nat. Herb. vii. 192 (1900); *Pleiotaenia nuttallii texana* C. & R., Contrib. U. S. Nat. Herb. xii. 448 (1909). Caulescent perennial, rising from a deep tap-root, 5–10 dm.

= Polytaenia texana (C. & R.) Mathias & Constance
BTBC. 68: 123-4, 1941.

tall: basal leaves one to several, short-petioled, 1–2 dm. long, once ternate and imperfectly pinnate, the segments broad, obtusely serrate, on broadly winged rhachises, glabrate, thick and oily to the touch: cauline leaves small, glabrate, and less dissected, but the segments similarly broad, obtusely serrate, and with broadly winged rhachises: umbels several, 6–16-rayed: fruit obovate, emarginate, 8–13 mm. long.— Texas and Oklahoma. Texas: near Industry, 1895, *H. Wurzlow* (type in U. S. Nat. Herb.); San Antonio, 1882, *V. Havard*, no. 234; Kerrville, Kerr Co., June 25, 1894, *A. A. Heller*, no. 1,669; limestone hill near Bracken, Bexar Co., July 1, 1903, *B. H. A. Groth*, no. 36; 1848, *Charles Wright; Wright;* Austin, 1919, *G. A. Bahm;* Bexar Co., *G. Jermy;* wet prairie, Houston, June 16, 1872, *Elihu Hall*, no. 257; near Houston, May 6, 1899, *J. N. Rose*, no. 4,900; Enchanted Rock, Gillespie Co., *G. Jermy*, no. 138; Fort Chadbourne, 1856, *Dr. Swift;* wet soil, San Leon, June 6, 1915, *George L. Fisher*, no. 1,535. Oklahoma: Wichita Mountains, July 1852, *Marcy's Expedition;* Muskogee, April 25, 1891, *M. A. Carleton*, no. 56.

The writer is indebted to Mr. W. R. Maxon of the National Museum for the loan from the government collections of a series of specimens very helpful in clarifying the generic segregation here discussed.

Gray Herbarium.

NYMPHOZANTHUS THE CORRECT NAME FOR THE COW LILIES.

M. L. Fernald.

The names of the water lilies have had an unfortunately disconcerting history, briefly summarized in Rhodora by Conard[1] who demonstrates that, after many decades of application to the white and pink water lilies, then a quarter-century of application to the cow lilies, the name *Nymphaea* really belongs, after all, to the white and pink water lilies to which it had so long and so appropriately been applied. Conard's most important reasoning, following an earlier discussion by Briquet,[2] was based on the fact that, long before others had generically separated the European white water lily, *Nymphaea alba* L., from the European cow lily, *N. lutea* L., Linnaeus himself made the

[1] Conard, Rhodora, xviii. 161–164 (1916).
[2] Briquet, Prodr. Fl. Corse, 577–599 (1910).

differentiation, in 1764 redefining[1] *Nymphaea* to include only *N. alba* and clearly to exclude *N. lutea*. This interpretation of *Nymphaea*, to cover only *N. alba* and its congeners, was also indorsed by Jussieu[2] sixteen years before the publication of *Castalia* by Salisbury.[3] It is thus clear that *Nymphaea* as emended by Linnaeus himself must stand for the later-published *Castalia*.

It is unfortunate, however, that, although we can go back with assurance to the long-established and most satisfactory use of the name *Nymphaea*, we cannot correctly take up again for the cow lilies the almost equally traditional name, *Nuphar*. To be sure, in his discussion of the subject Conard draws the comforting conclusion that "Smith was right, therefore, in retaining Nymphaea L. emend., for the white waterlilies, and restoring the old prelinnean name Nuphar for the cow-lily group. For this latter group had not previously received a valid generic name in postlinnean times." But, although citing Mr. James Britten's article[4] in which attention was definitely directed to L. C. Richard's name *Nymphozanthus*[5] and its clear priority over *Nuphar*,[6] Conard, it would seem, quite overlooked this essential fact, that *Nymphozanthus* was well published many months before Smith's genus *Nuphar*. *Nuphar*, as shown by Britten, did not appear until the very last of the year 1808 or the beginning of 1809, while *Nymphozanthus* was published in May, 1808. On page 63 of his *Analyse du Fruit* Richard spelled the name *Nymphozanthus*, on page 68, where it was formally proposed for the genus, he spelled it *Nymphosanthus*, and on page 103, in the index, he again spelled it with a *z*. That the second spelling may be considered a typographical error is evident from the fact that in his later publication on the genus, in 1811, Richard formally made the combination *Nymphozanthus vulgaris*[7] for *Nymphaea lutea* L. There seems no need, then, to perpetuate the spelling *Nymphosanthus* as some have done nor to change it to *Nymphoxanthus* as is done by Post & Kuntze[8] nor to *Nymphosanthos* as is done by Britten. That the name, however spelled, clearly antedates *Nuphar* has been sufficiently demonstrated.

[1] L. Gen. Pl. ed. 6, 264 (1764).
[2] Juss. Gen. Pl. 68 (1789).
[3] Salisb. in Kön. & Sims, Ann. Bot. ii. 71 (1805).
[4] J. Britten, Journ. Bot. xxvi. 7 (1888).
[5] L. C. Richard, Anal. du Fruit, 63, 68, 103 (May, 1808).
[6] Smith in Sibth. & Sm. Fl. Graec. Prodr. i. 361 (late 1808 or early 1809).
[7] L. C. Richard, Ann. Mus. Par. xvii. 230 — reprint 8 (1811).
[8] Post & Kuntze, Lex. Gen. Pl. 393 (1904).

It is interesting, however, that this fact was recognized by Desvaux in 1818, when, by clerical error apparently, he called the genus *Nymphanthus*[1] and called *Nymphaea lutea Nymphanthus europaeus*, with the comment: "Ces deux genres sont parfaitement distincts," etc., and again in 1827 when he corrected the name to *Nymphosanthus* with the note: "nous croyons que le nom de *Nymphosanthus* proposé by C. L. Richard est antérieur à celui de *Nuphar*."[2]

The status of the generic names of the cow lilies seems to be as follows.

Nymphozanthus L. C. Richard, Anal. du Fruit, 63, 68 (as *Nymphosanthus*), 103 (May, 1808); Ann. Mus. Par. xvii. 230 — reprint 8 (1811); Desv. Fl. de l'Anjou, 80 (1827).

Nymphaea L. Sp. Pl. i. 510 (1753), in part; Greene, Bull. Torr. Bot. Cl. xiv. 177–179, 257–258 (1887) and most subsequent authors; not L. Gen. Pl. ed. 6, 264 (1764), nor Juss. Gen. Pl. 68 (1789).

Nuphar Sm. in Sibth. & Sm. Fl. Graec. Prodr. i. 361 (late 1808 or early 1809).

Nenuphar Hayne, Getreue Darstel. und Beschreib. Arzneik. iv. t. 36 (1816).

Nymphanthus Desv. Obs. Pl. Angers, 83 (1818).

Clairvillea Hegetschweil. in Labram & Hegetschweil. Samml. Schweiz. Pflanz. t. 21 (1826–1834).

Blepharia Sm. Mem. & Corr. i. 576 (1832).

Rophalon Raf. New Fl. N. Am. ii. 17 (1836).

Nenufar Peterm. Fl. Lips. 396 (1838).

Nufar Wallr. Erst. Beitr. Fl. Hercyn. 212 (1840) and in Linnaea, xiv. 582 (1840).

Nyphar Walp. Rep. i. 108 (1842).

Nymphona Bubani, Fl. Pyr. iii. 260 (1901).

The principal species[3] of *Nymphozanthus*, chronologically arranged, are the following:

Nymphozanthus **luteus** (L.), n. comb. *Nymphaea lutea* L. Sp. Pl. i. 510 (1753)— misprinted *N. "lusea." Nymphaea umbilicalis* Salisb. in Kön. & Sims, Ann. of Bot. ii. 71 (1805). *Nuphar lutea* (L.) Sm. in Sibth. & Sm. Fl. Graec. Prodr. i. 361 (late 1808 or early 1809). *Nymphozanthus vulgaris* L. C. Richard, Ann. Mus. Par. xvii. 230 — repr.

[1] Desv. Obs. Pl. Angers, 83 (1818).

[2] Desv. Fl. de l'Anjou, 80 (1827).

[3] The writer has seen no material of several recently proposed species which he consequently omits from the present enumeration.

8 (1811). *Nenuphar lutea* (L.) Hayne, Getreue Darstel. und Beschreib. Arzneik. iv. t. 36 (1816). *Nymphanthus europaeus* Desv. Obs. Pl. Angers, 84 (1818). *Clairvillea lutea* (L.) Hegetschweil. in Labram & Hegetschweil. Samml. Schweiz. Pflanz. t. 21 (1826-1834). *Nymphosanthus europaeus* Desv. Fl. de l'Anjou, 80 (1827). *Nufar systylum* Wallr. Erst. Beitr. Fl. Hercyn. 212 (1840) and in Linnaea, xiv. 582 (1840). *Nyphar luteum* (L.) Walp. Rep. i. 108 (1842). *Nymphona lutea* (L.) Bub. Fl. Pyr. iii. 260 (1901).— Eurasia.

Nymphoz. **sagittifolius** (Walt.), n. comb. *Nymphaea sagittifolia* Walt. Fl. Carol. 155 (1788). For further synonymy see Miller & Standley, Contrib. U. S. Nat. Herb. xvi. 95 (1912).— North America.

Nymphoz. **advena** (Ait.), n. comb. *Nymphaea advena* Ait. Hort. Kew. ii. 226 (1789). *Nymphaea arifolia* Salisb. in Kön. & Sims, Ann. Bot. ii. 71 (1805). *Nuphar advena* (Ait.) Ait. f. Hort. Kew. ed. 2, iii. 295 (1811). *Nenuphar advena* (Ait.) Link, Enum. Hort. Berol. ii. 70 (1822). *Nuphar advena β. tomentosa* Torr. & Gray, Fl. N. Am. i. 58 (1838), fide Miller & Standley, Contrib. U. S. Nat. Herb. xvi. 89 (1912). *Nuphar tomentosa* Nutt. ex Torr. & Gray, l. c. (1838). *Nyphar advena* (Ait.) Walp. Rep. i. 108 (1842). *Nuphar americana* Provancher, Fl. Canad. i. 28 (1862), a substitute for the inappropriate name, *N. advena* — see Fernald & St. John, Rhodora, xvi. 138–141 (1914).— North America.

Nymphoz. advena, var. **macrophyllus** (Small), n. comb. *Nymphaea macrophylla* Small, Bull. Torr. Bot. Cl. xxv. 465 (1898). *Nymphaea advena macrophylla* (Small) Miller & Standley, Contrib. U. S. Nat. Herb. xvi. 89 (1912).— North America.

Nymphoz. **pumilus** (Timm), n. comb. *Nymphaea lutea β. pumila* Timm, Mag. für Naturk. Meckl. ii. 256 (1792). *Nymph. lutea β. N. minima* Willd. Sp. Pl. ii. 1151 (1799). *Nymph. pumila* (Timm) Hoffm. Deutschl. Fl. ed. 2, 1, pt. 1, 241 (1800). *Nuphar minima* (Willd.) Sm. Engl. Bot. xxxii. t. 2292 (1811). *Nymph. minima* Willd. Enum. Hort. Bot. Berol. Suppl. 38 (1813). *Nenuphar minimum* (Willd.) Link, Enum. Hort. Berol. ii. 70 (1822). *Nenuphar pumila* (Timm) Bluff & Fingerh. Consp. Fl. Germ. i. 705 (1825). *Nyphar pumilum* (Timm) Walp. Rep. i. 108 (1842).— Eurasia.

Nymphoz. **microphyllus** (Pers.), n. comb. *Nymphaea lutea* L. Sp. Pl. i. 510 (1753), as to Kalm plant only. *Nymph. lutea β. Kalmiana* Michx. Fl. Bor.-Am. i. 311 (1803), in large part. *Nymph. microphylla* Pers. Syn. ii. 63 (1807). *Nymph. Kalmiana* (Michx.) Sims in Curt. Bot. Mag. t. 1243 (1809). *Nuphar Kalmiana* (Michx.) Ait. f. Hort. Kew. ed. 2, iii. 295 (1811). *Nuphar lutea β. Kalmiana* (Michx.) Torr. & Gray, Fl. N. A. i. 58 (1838). *Nyphar luteum β. Kalmianum* (Michx.) Walp. Rep. i. 108 (1842). *Nuphar microphyllum* (Pers.) Fernald, Rhodora, xix. 111 (1917).— North America.

The material in the Michaux herbarium shows 2 sheets of his *Nymphaea lutea β Kalmiana*. One contains material from "Rivièrre Chi-

coutoumé" and from "Lac Champlain" and is the plant usually identified as *Nuphar Kalmianum* or *Nymphaea microphylla*. The second sheet, from "Rivière Chicoutoumé" is the plant later described as *Nuphar rubrodiscum* by Morong.

Nymphoz. **japonicus** (DC.), n. comb. *Nymphaea lutea* Thunb. Fl. Jap. 223 (1784), excl. syn., not L. *Nuphar japonica* DC. Syst. ii. 62 (1821). *Nymphaea japonica* (DC.) Kuntze, Rev. Gen. 12 (1891).— Asia.

Nymphoz. **sericeus** (Lang), n. comb. *Nuphar sericeum* Lang in Syll. Ratisb. i. 180 (1824). — Europe.

Nymphoz. **intermedius** (Ledeb.), n. comb. *Nuphar intermedium* Ledeb. Fl. Alt. ii. 274 (1830). *Nyphar intermedium* (Ledeb.) Walp. Rep. i. 108 (1842). — Eurasia.

Nymphoz. **polysepalus** (Engelm.), n. comb. *Nuphar polysepalum* Engelm. Trans. Acad. St. Louis, ii. 283 (1865). *Nymphaea polysepala* (Engelm.) Greene, Bull. Torr. Bot. Cl. xv. 84 (1888).— North America.

Nymphoz. **subintegerrimus** (Casp.), n. comb. *Nuphar japonicum*, var. *subintegerrimum* Casp. in Miq. Ann. Mus. Bot. Lugd.-Bat. ii. 254, t. 8, figs. 1–10 (1865–66). *N. subintegerrimum* (Casp.) Makino, Bot. Mag., Tokyo, xxiv. 141 (1910). — Asia.

Nymphoz. **variegatus** (Engelm.), n. comb. *Nuphar variegatum* Engelm. according to Durand in Ann. Rep. Univ. N. Y. xix. 73 (1866). *Nuphar advena*, var. *variegatum* Engelm. in Gray, Man. ed. 5, 57 (1867). *Nymphaea variegata* (Engelm.) G. S. Miller, Proc. Biol. Soc. Wash. xv. 13 (1902). *Nymph. advena*, var. *variegata* (Engelm.) Fernald, Rhodora, x. 49 (1908). *Nymph. americana* Miller & Standley, Contrib. U. S. Nat. Herb. xvi. 78, (1912), as to plant, hardly *Nuphar americana* Provancher, Fl. Canad. 28 (1862) — see Fernald & St. John, Rhodora, xvi. 138–141 (1914). — North America.

Nymphoz. **rubrodiscus** (Morong), n. comb. *Nymphaea lutea* β. *Kalmiana* Michx. Fl. Bor.-Am. i. 311 (1803), in part. *Nuphar advena*, var. *hybrida* Peck, Ann. Rep. N. Y. Mus. Nat. Hist. xxxiv. 53 (1881). *Nuphar advena*, var. (?) *minor* Morong, Bot. Gaz. xi. 167 (1886). *Nuphar rubrodiscum* Morong, l. c. (1886). *Nymphaea rubrodisca* (Morong) Greene, Bull. Torr. Bot. Cl. xv. 84 (1888). *Nymph. Fletcheri* Lawson, Proc. and Trans. Roy. Soc. Can. sect. 4, vi. 119 (1888). *Nymph. hybrida* Peck. Bull. N. Y. State Mus. vi. 75 (1899).— North America. Often considered a fertile hybrid of *N. microphyllus* and *N. variegatus*.

Morong's *Nuphar advena* var. (?) *minor* was based solely on "Specimens without leaves...in Herb. Gray," but with flower and fruits which Morong described, with the final statement: "They are labelled 'Smith's Pond, Herkimer Co., Litchfield, New York.' Further

material is very desirable." But Miller & Standley cite the name of this variety in the synonymy of their *Nymphaea americana* (*Nymphoz. variegatus*) and in the synonymy of *Nymphaea rubrodisca* say: "*Nuphar advena minus* Wats. & Coult. in A. Gray, Man. ed. 6, 56. 1889, not Morong." Nevertheless, they correctly cite under *Nymphaea rubrodisca* the Gray material from Smith's Pond, Herkimer Co. It should be obvious, since this material was the sole basis of Morong's *Nuphar advena*, var. (?) *minor*, that his variety is correctly referred to *Nymphozanthus rubrodiscus*.

Nymphoz. **affinis** (Harz), n. comb. *Nuphar affine* Harz, Bot. Centralb. liii. 224 (1893). *Nymphaea affinis* (Harz) Hayek, Fl. Steierm. i. 437 (1908). *Nymphaea lutea*, var. *affinis* (Harz) Schuster, Bull. Herb. Boiss. sér. 2, viii. 69 (1908).— Europe.

Nymphoz. **juranus** (Magnin), n. comb. *Nuphar juranum* Magnin, Ann. Soc. Bot. Lyon, xix. 1893–94, Compt. Rend. 5 (1894).— Europe.

Nymphoz. **orbiculatus** (Small), n. comb. *Nymphaea orbiculata* Small, Bull. Torr. Bot. Cl. xxiii. 128 (1896).— North America.

Nymphoz. **centricavatus** (Schuster), n. comb. *Nuphar centricavatum* Schuster, Allgem. Bot. Zeitschr. xi. 145 (1905).— Europe.

Nymphoz. **fluviatilis** (Harper), n. comb. *Nymphaea fluviatilis* Harper, Bull. Torr. Bot. Cl. xxxiii. 234 (1906).— North America.

Nymphoz. **bombycinus** (Miller & Standley), n. comb. *Nymphaea bombycina* Miller & Standley, Contrib. U. S. Nat. Herb. xvi. 102, t. 42 F and 45 B (1912).— North America.

Gray Herbarium.

Deam's Trees of Indiana.[1]— When the first edition of the report of the Indiana State Board of Forestry for 1911 was issued, the Board had the foresight to plate that part of it relating to the trees of Indiana. Since the original edition of 10,000 copies is now exhausted, it has been possible for Mr. Deam to publish a revision of his excellent report, with numerous corrections and additional notes, largely based on the results of his own thorough study of the Indiana flora. Probably no American botanist covers more of his chosen field in the course of one season than Mr. Deam. His automobile, fitted up as residence and laboratory, takes him to every corner of the State, and enables him to keep his large private herbarium fully representative of the State flora. His appointment as State Forester has given him especial opportunity to prosecute his studies in what has always been his

[1] The Trees of Indiana. By Chas. C. Deam. Bulletin No. 3, State Board of Forestry of Indiana. Indianapolis, March, 1919. p. 299.

favorite group. The present revision is an admirable example of popular treatment which does not sacrifice essential scientific accuracy. In all, 125 species are described, representing 49 genera in 28 families. The term "tree" is interpreted as including all woody plants that usually attain a diameter of 10–15 cm. — an arbitrary division that will not always prove satisfactory, since *Hamamelis virginiana*, *Euonymus atropurpureus* and *Kalmia latifolia* would seem to have at least as much right to be represented as *Ilex decidua* or *Cornus alternifolia*. *Crataegus* heads the list with 18 species (as might have been expected when it is explained that the genus was revised for this work by Eggleston!) and *Quercus* is a close second with 17. No less than 15 species which have been referred to Indiana are rejected as unconfirmed. Confirmation of included species is made by simple citation of collector and county of collection, without herbarium numbers, dates, or place of deposit. Each species is given a simple and untechnical description, followed by a discussion of its distribution, economic uses, and horticultural value; and each is illustrated by a careful drawing, showing a leafy branch with fruit or flowers, or both together. The solitary photograph of *Fraxinus Michauxii* makes us wish that the general habit of other species might have been illustrated in the same way. Two valuable tables are added, one showing the specific gravity of the wood of each species (ranging from 0.8372 for *Hicoria ovata* to 0.3164 for *Thuja occidentalis*), and the other giving measurements of 49 species, showing *Platanus occidentalis* ranking first in circumference (maximum 48 ft.) and *Liriodendron Tulipifera* in height (190 ft.). A map of the State is added to make the distribution more clear. The key to the families is constructed without regard to floral characters, and is based primarily on the leaves, so that all natural relationships are lost to view, as in Dr. Mosher's recent study of the Grasses of Illinois. Doubtless the popular appeal of these manuals is intensified by these unscientific keys, but it is an open question whether systematic accuracy has not been sacrificed to ease of determination.

The author makes a praiseworthy attempt to attach definite meanings to the terms ordinarily used to express degree of frequency, which have been sadly lacking in scientific precision. He suggests the following scale: "Very common," more than 25 trees to the acre; "common," 5–25 trees to the acre; "frequent," 1–5 trees to the acre; "infrequent," 1 tree to 2–10 acres; "rare," 1 tree to every 11–100 acres; "very rare," 1 tree to more than 100 acres; "local," when the distribution is circumscribed or in spots. While this is of course wholly arbitrary, it is at least a step in the right direction.

The nomenclature is said by the author to conform "to that of the United States Forest Service", which means that the provinciality of the so-called "American" Code is unfortunately perpetuated. Accordingly, we are treated to such absurdities as *Catalpa Catalpa* and *Sassafras Sassafras*, while substitutions such as *Hicoria* for *Carya*

and *Forestiera* for *Adelia* are maintained. Some "splitting" of families not in accordance with Gray's Manual is observed, such as the separation of Ulmaceae and Moraceae from Urticaceae, Malaceae and Amygdalaceae from Rosaceae, and Caesalpinaceae from Leguminosae. *Liquidambar* is placed in Altingiaceae, and *Aesculus* in Aesculaceae. *Malus* is separated from *Pyrus*, and *Padus* from *Prunus*. The genus *Cynoxylon* is revived for *Cornus florida*.

Betula papyrifera Marsh. is recognized as of specific rank, instead of being treated as a variety of *B. alba*. *Celtis pumila* (Muhl.) Pursh seems hardly worth specific rank. Michaux's *Acer nigrum*, reduced by Britton to a variety of *A. saccharum*, is restored to the rank of a species. *Fraxinus Michauxii* Britt., although no synonymy is cited, seems to replace *F. profunda* Bush. Eggleston's treatment of *Crataegus* shows several departures from the views set forth in his exposition of this genus in the last edition of Gray's Manual, and makes us wonder if this much-tortured group is ever going to return to stable conditions. *C. pausiaca* Ashe is replaced by *C. cuneiformis* (Marsh.) Eggleston; *C. macracantha* Lodd. var. *succulenta* (Schrad.) Eggleston is raised to specific rank; *C. deltoidea* Ashe is replaced by *C. rugosa* Ashe; *C. coccinea* L. var. *oligandra* Torr. & Gr. becomes *C. Gattingeri* Ashe; *C. coccinea* L. seems to be regarded as identical with *C. pedicellata* Sarg., and we are left in doubt as to what name should now be given to the *C. coccinea* of the Manual; and two species not mentioned in the Manual, *C. neo-fluvialis* Ashe and *C. Calpodendron* (Ehrh.) Medic., make their appearance.

A few errors in the citation of authors are noted. *Ostrya virginiana* (Mill.) K. Koch is cited as a synonym of *O. virginiana* (Mill.) Willd.; but Willdenow's name for the species seems to have been *virginica*. *Betula lutea* is ascribed to the elder rather than the younger Michaux, and in the same way *Cornus alternifolia* to the elder instead of the younger Linnaeus. *Alnus incana* is credited to Muenchhausen, perhaps from confusion of the abbreviation "Muench." with the name Moench. *Quercus palustris* is credited to DuRoi instead of Muenchhausen. *Toxylon pomiferum* was never given valid publication by Rafinesque, and the adherents of the "American" Code would if consistent have to use the name *Ioxylon*. The accent of scientific names is indicated by the use of grave and acute accents, as in Gray's Manual; but the following names of genera: *Liriodendron*, *Robinia*, *Aesculus*, *Tilia*, *Nyssa*, *Diospyros;* and of species: *lucida* (p. 39), *heterophylla* (pp. 47, 242), *ovata* (p. 62), *fulva* (p. 137), *velutina* (p. 127), *Michauxii* (p. 259), remain unmarked. An attempt has been made to indicate the etymology of generic names; but out of 49 genera only 22 are so explained, and some of these derivations are decidedly suspicious. The apparent relation between *Populus* and the Latin *populus*, the common people, is wholly deceptive, as also between *Acer* and *acer*, sharp. The attempt to show a "Celtic" origin for such classical Latin words as *Salix*, *Quercus*, *Carpinus*, *Betula* and *Alnus* seems to be

based more on unsupported theory than demonstrated fact. *Ostrya* is said to be "from the Greek ostreon, a scale or shell, in allusion to the fruit"; but ὄστρεον means oyster, and the Greek word for the hornbeam is ὀστρύα. *Morus* is "from the Greek morea, the mulberry." The two are probably cognate, but neither one is "from" the other. *Viburnum* is said to be "from the Latin, meaning the wayfaring" [sic]. The origin is much in doubt, but the derivation from *viere*, to plait, seems a possibility. The spelling Simaroubaceae hardly seems in accord with the best usage. *Larix laricina* appears as "laricia" in the title to the plate on p. 27.

On the whole, the book is unusually free from typographical errors, and presents an attractive appearance. It will be welcomed by every lover of our native trees, and could be used to great advantage as a text-book in the schools. Mr. Deam has rendered a distinct service to dendrology by reissuing his admirable bulletin; and the data which he has painstakingly gathered will become more and more valuable as the process of deforestation of our native woodlands goes on.—J. C. Nelson, Salem, Oregon.

Field Meeting of the Vermont Botanical Club.—The Vermont Botanical Club held its annual field meeting this year at North Hero on Lake Champlain, August 5–6, conjointly with the Vermont Bird Club. Thirty members were present, which is a very good attendance.

On the 5th trips were made to Pelot's Bay and to a smaller bay opening out of it, both being rich in water-weeds of various sorts, such as Potamogetons, Myriophyllums, etc. Here were found *Potamogeton heterophyllus*, *P. zosterifolius*, *P. dimorphus*, *P. Richardsonii*, *P. perfoliatus*, *Myriophyllum spicatum*, *M. alterniflorum*, and the stiff White Water Crowfoot, *Ranunculus circinatus*. On the muddy shores were several species of sedges, *Scirpus validus*, *S. heterochaetus*, and *S. occidentalis* being among the number.

The morning of the 6th was rainy, but in the afternoon a trip was made to "The Gut," as the passage between North and South Hero Islands is called. The Moonseed, *Menispermum canadense*, and the Sanicle, *Sanicula trifoliata*, among a host of other plants, were growing in the woods bordering the Lake, and on its muddy shore were found the Water Pimpernel, *Ilysanthes dubia*, the Creeping *Eragrostis*, *E. hypnoides*, the Arrowheads, *Sagittaria arifolia* and *S. graminea*, and best of all the Waterwort, *Elatine americana*, new to the state, and the little *Littorella uniflora*, for which this is the fourth station in the state. These were certainly good finds for one afternoon.

Owing to the war and the prevalence of influenza the Club has held no winter meeting since 1917 and as the summer meetings of 1917 and 1918 have not been reported in Rhodora perhaps its readers will be interested in a few words about them.

The meeting of 1917 was held at Mt. Mansfield on July 1st with a good attendance. The summit was explored and though nothing new can be reported, such plants as *Diapensia lapponica, Vaccinium Vitis-Idaea* var. *minus, V. pennsylvanicum* var. *angustifolium, V. caespitosum,* and *V. uliginosum,* as well as some of the mountain sedges and grasses, as for instance *Carex brunnescens, C. paupercula* var. *pallens,* and *Hierochloë alpina,* were found in good condition and proved interesting to all.

One day was devoted to a tramp by the Long Trail to Smuggler's Notch, where on the cliffs on both sides grow such rare plants as *Saxifraga Aizoon, S. aizoides, S. oppositifolia, Woodsia glabella, W. alpina, Asplenium viride, Festuca ovina* var. *brevifolia,* and, at Big Spring, which pours forth as a small brook, was found *Listera convallarioides.* In passing it may be said that *Aspidium fragrans* grows near the summit.

The summer meeting of 1918 was held at Wilmington early in July. It rained much of the time, but some collecting was done, the most notable finds being the Arrow Arum, *Peltandra virginica,* growing at Lake Sadawga in Whitingham. There were floating islands in this lake but no boats available to reach them, so it was necessary to be content with one still anchored to shore. Here, in addition to the *Peltandra,* were all the orchids, sedges, heaths, and other plants common to our sphagnum-swamps.

One day was given to climbing Haystack Mountain, but out of a wealth of vegetation nothing new to the state was found unless by the blackberry specialists, who may have a word to say on that point, as a bulletin on the group will soon be issued by the University of Vermont.

The next winter meeting will be held at Burlington, probably in the latter part of January. For the summer meeting of 1920 many members of the Club are in favor of the Averil Lakes in Essex County, a region that has been very little if at all explored botanically.— (Mrs.) Nellie F. Flynn, Burlington, Vermont.

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